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(54) **REAL-TIME USER ADAPTIVE FOVEATED RENDERING**

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ABSTRACT

Foveated rendering based on user gaze tracking may be adjusted to account for the realities of human vision. Gaze tracking error and state parameters may be determined from gaze tracking data representing a user's gaze with respect to one or more images presented to a user. Adjusted foveation data representing an adjusted size and/or shape of one or more regions of interest in one or more images to be subsequently presented to a user may be generated based on the one or more gaze tracking error or state parameters. Foveated image data representing one or more foveated images may be generated with the adjusted foveation data. The foveated images are characterized by level of detail within the one or more regions of interest and lower level of detail outside the one or more regions of interest. The foveated images may then be presented to the user.

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